

What is claimed is:

1. An electric power steering apparatus comprising;

an electric motor for adding the assist steering force
5 to a steering system,

a controller which drives said electric motor,

a rack shaft which steers a steered wheel by displacing
along the axial direction thereof,

a pinion shaft which is engaged with said rack shaft
10 through a rack-and-pinion mechanism,

a worm shaft which is rotated by the electric motor, and

a worm wheel which is engaged with said worm shaft and
is integrally arranged with the pinion shaft,

one end part of the worm shaft is joined with the electric
15 motor, and holding means, which holds one end part and another
end part of the worm shaft on allowing the rotation thereof,
is further arranged.

2. An electric power steering apparatus according to claim 1,
20 wherein said holding means is composed of a plurality of ball
bearings which hold one end part of the worm shaft, and a
plurality of ball bearings which hold the another end part of
the worm shaft.

25 3. An electric power steering apparatus according to claim 1,
wherein said holding means is composed of a plurality of ball

bearings which hold the one end part of the worm shaft, and a needle bearing which holds another end part of the worm shaft.

4. An electric power steering apparatus comprising;

5 an electric motor for adding the assist steering force to a steering system,

 a controller which drives said electric motor,

 a rack shaft which steers a steered wheel by displacing along the axial direction thereof,

10 a pinion shaft which is engaged with said rack shaft through a rack-and-pinion mechanism,

 a worm shaft which is rotated by the electric motor,

 a worm wheel which is engaged with said worm shaft and is integrally arranged with the pinion,

15 end part holding means which holds the one end part of the worm shaft on allowing the rotation of the worm shaft, and

 center supporting means which holds the center part in the longitudinal direction of the worm shaft on allowing the rotation of the worm shaft,

20 one end part of said worm shaft is joined with the electric motor.

5. An electric power steering apparatus according to claim 4,

wherein said center supporting means has urging means which

25 gives the urging force towards the engaging part between the worm shaft and the worm wheel from the opposite direction with

respect to the engaging part.

6. An electric power steering apparatus according to claim 5,
wherein said center supporting means has a first roller and a
5 second roller which are touched to the worm shaft and press the
worm shaft toward the engaging part between the worm shaft and
the worm wheel.